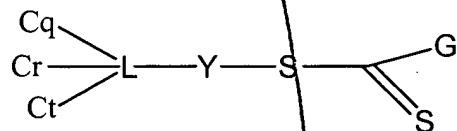


Sub B4
bonding an iniferter initiator to a substrate surface at one or more points to form a derivatized surface, said iniferter initiator comprising an initiator-control agent adduct having the formula:



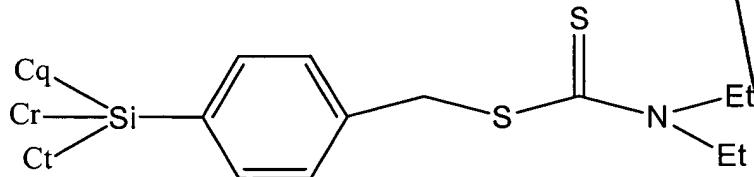
wherein C is a moiety on the surface of the substrate; L is a linker group capable of bonding to at least one C moiety; q, r and t are independently 0 or 1, provided the sum of $q + r + t$ is at least 1; Y is a residue capable of initiating free radical polymerization upon UV initiated cleavage of the Y-S bond; S is sulfur; and, G is a nitrogen or an oxygen heteroatom;

O
contacting said derivatized surface with a composition comprising a water-soluble or water-dispersible free radically polymerizable monomer mixture, the mixture containing an acrylamide-based monomer and at least 1 other monomer, under reaction conditions to form bound polymer chains comprising a water-dispersible segment having a weight average molecular weight of at least about 1000 and one or more functionalized sites thereon, the functionalized site(s) being formed in its(their) active state for reaction with a probe selective for the biological molecule; and

bonding the probe to the bound polymer chains through the active functionalized sites.

Please substitute the following for claim 19:

19. (amended) The method according to claim 18 wherein said bound iniferter initiator comprises an initiator-control agent adduct having the formula:



wherein Et is ethyl.

Please add new claims 26-28:

*sub
bit*

26. (new) The method according to claim 17 further comprising separating unbound polymer after said derivatized surface is contacted with a composition comprising the monomer mixture to form polymer chains.

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27. (new) The method according to claim 26 wherein the monomer mixture additionally contains an unbound iniferter initiator.

28. (new) The sensor of one of preceding claims 17-27.